

I claim:

1. An embedded web server capable of managing dynamic content delivery of data stream, audio stream, or video stream, said embedded web server comprising:

- 5 a microprocessor;
- a memory, said memory connected to said microprocessor;
- a network port, said network port connected to said microprocessor;
- a dynamic internet streaming engine for XML, HTML and raw data, said dynamic internet streaming engine, connected to said microprocessor, capable of enabling said embedded web server to deliver dynamic text and binary data stream editing for performing complex actions and making interactive web, propagating changes made in one place instantly to thousands of files, compiling code directly into HTML, and facilitating rapid application development and web site prototyping;
- a security key generating application, said security key generating application, connected to said microprocessor, capable of generating security keys based on a mathematical and biological equation, said mathematical and biological equation guaranteeing said security keys being unique and random; and
- an object-oriented language, said object-oriented language, understood by said microprocessor, allowing access to preprocess directives from both C++ code written by a developer and HTML code written by a graphic artist or web designer.
- 20

2. The embedded web server in claim 1, wherein said embedded web server is capable of running high-performance electronic commerce web sites.

3. The embedded web server in claim 1, wherein said embedded web server is capable of embedding and securing data, content, protocols and scripts.

4. The embedded web server in claim 1, wherein said embedded web server is capable of delivering real time response.

5. The embedded web server in claim 1, wherein said embedded web server is capable of functioning as a web server.

6. The embedded web server in claim 1, wherein said embedded web server is capable of operating without an operating system.

7. The embedded web server in claim 1, wherein said embedded web server is capable of creating a template, said template being then compiled and loaded into said embedded web server, said template capable of specifying protocol, content, data, and being a scripting language to translate inbound requests.

8. The embedded web server in claim 1, wherein said embedded web server is capable of running without human intervention once an initial configuration being completed.

9. The embedded web server in claim 1, wherein said dynamic internet streaming engine is specifically designed to facilitate rapid application development and web site prototyping.

10. The embedded web server in claim 1, wherein said dynamic internet streaming engine includes IP level security features.

11. The embedded web server in claim 1, wherein said dynamic internet streaming engine allows developers to quickly add or change features without the need for code changes.

12. An embedded web server capable of managing dynamic content delivery of data stream, audio stream, or video stream, said embedded web server comprising:

a microprocessor;

a memory;

a network port;

a dynamic internet streaming engine;

a security key generating application capable of generating security keys;

an embedded web server housing, said microprocessor, said memory, said

network port, said dynamic internet streaming engine, and said security key generating application all being disposed within said embedded web server housing; and

an object-oriented language, said object-oriented language understood and used by said embedded web server.

10  
15  
20  
25  
30  
35  
40  
45  
50  
55  
60  
65  
70  
75  
80  
85  
90  
95  
100

13. The embedded web server in claim 12, wherein said embedded web server is capable of running high-performance electronic commerce web sites.

5 14. The embedded web server in claim 12, wherein said embedded web server is capable of embedding and securing data, content, protocols and scripts.

15. The embedded web server in claim 12, wherein said embedded web server is capable of delivering real time response.

16. The embedded web server in claim 12, wherein said embedded web server is capable of functioning as a web server.

17. The embedded web server in claim 12, wherein said embedded web server is capable of operating without an operating system.

18. The embedded web server in claim 12, wherein said embedded web server is capable of creating a template, said template being then compiled and loaded into said embedded web server, said template capable of specifying protocol, content, data, and  
20 being a scripting language to translate inbound requests.

19. The embedded web server in claim 12, wherein said embedded web server is capable of running without human intervention once an initial configuration is completed.

20. The embedded web server in claim 12, wherein said dynamic internet streaming engine is specifically designed to facilitate rapid application development and web site prototyping.

5

21. The embedded web server in claim 12, wherein said dynamic internet streaming engine includes IP level security features.

22. The embedded web server in claim 12, wherein said dynamic internet streaming engine allows developers to quickly add or change features without the need for code changes.

23. The embedded web server in claim 12, wherein said dynamic internet streaming engine is capable of enabling said embedded web server to deliver dynamic text and binary data stream editing for performing complex actions and making interactive web.

24. The embedded web server in claim 12, wherein said dynamic internet streaming engine is capable of propagating changes made in one place instantly to thousands of files.

25. The embedded web server in claim 12, wherein said dynamic internet streaming engine is capable of compiling code directly into HTML.

26. The embedded web server in claim 12, wherein said dynamic internet streaming engine is capable of facilitating rapid application development and web site prototyping.

27. The embedded web server in claim 12, wherein said security key generating application is capable of generating security keys based on a mathematical and biological equation.

28. The embedded web server in claim 12, wherein said security keys are guaranteed to be unique and random.

29. The embedded web server in claim 12, wherein said object-oriented language allows access to preprocess directives from both C++ code and HTML code.

30. An embedded web server capable of managing dynamic content delivery of data stream, audio stream, or video stream, said embedded web server comprising:

a microprocessor;

a memory, said memory connected to said microprocessor;

a network port, said network port connected to said microprocessor;

a dynamic internet streaming engine, said dynamic internet streaming engine

controlled by said microprocessor;

a security key generating application, said security key generating application controlled by said microprocessor capable of generating security keys; and

an object-oriented language, said object-oriented used by said microprocessor.

31. The embedded web server in claim 30, wherein said dynamic internet streaming engine is specifically designed to facilitate rapid application development and web site prototyping.

5

32. The embedded web server in claim 31, wherein said dynamic internet streaming engine includes IP level security features.

33. The embedded web server in claim 32, wherein said dynamic internet streaming engine allows developers to quickly add or change features without the need for code changes.

34. The embedded web server in claim 33, wherein said dynamic internet streaming engine is capable of enabling said embedded web server to deliver dynamic text and binary data stream editing for performing complex actions and making interactive web.

35. The embedded web server in claim 34, wherein said dynamic internet streaming engine is capable of propagating changes made in one place instantly to thousands of files.

20

36. The embedded web server in claim 35, wherein said dynamic internet streaming engine is capable of compiling code directly into HTML.

37. The embedded web server in claim 36, wherein said dynamic internet streaming engine is capable of facilitating rapid application development and web site prototyping.

38. The embedded web server in claim 37, wherein said embedded web server is  
5 capable of running high-performance electronic commerce web sites.

39. The embedded web server in claim 38, wherein said embedded web server is capable of embedding and securing data, content, protocols and scripts.

40. The embedded web server in claim 39, wherein said embedded web server is  
10 capable of delivering real time response.

41. The embedded web server in claim 40, wherein said embedded web server is  
15 capable of functioning as a web server.

42. The embedded web server in claim 41, wherein said embedded web server is  
20 capable of operating without an operating system.

43. The embedded web server in claim 42, wherein said embedded web server is  
25 capable of creating a template, said template being then compiled and loaded into said  
embedded web server, said template capable of specifying protocol, content, data, and  
being a scripting language to translate inbound requests.



44. The embedded web server in claim 43, wherein said embedded web server capable of running without human intervention once an initial configuration is completed.

45. The embedded web server in claim 30, wherein said security key generating application is capable of generating security keys based on a mathematical and biological equation.

46. The embedded web server in claim 45, wherein said security keys are guaranteed to be unique and random.

47. The embedded web server in claim 30, wherein said object-oriented language allows access to preprocess directives from both C++ code and HTML code.

48. An embedded device capable of managing dynamic content delivery of data stream, audio stream, or video stream, said embedded device comprising:

a microprocessor;

a memory, said memory connected to said microprocessor;

a network port, said network port connected to said microprocessor;

a dynamic internet streaming engine, said dynamic internet streaming engine

connected to said microprocessor;

a security key generating application capable of generating security keys, said security key generating application connected to said microprocessor; and

an object-oriented language, said object-oriented language understood by said microprocessor.

49. The embedded device in claim 48, wherein said embedded device is capable of running high-performance electronic commerce web sites.

50. The embedded device in claim 48, wherein said embedded device is capable of embedding and securing data, content, protocols and scripts.

51. The embedded device in claim 48, wherein said embedded device is capable of delivering real time response.

52. The embedded device in claim 48, wherein said embedded device is capable of functioning as a device.

53. The embedded device in claim 48, wherein said embedded device is capable of operating without an operating system.

54. The embedded device in claim 48, wherein said embedded device is capable of creating a template, said template being then compiled and loaded into said embedded device, said template capable of specifying protocol, content, data, and being a scripting language to translate inbound requests.

55. The embedded device in claim 48, wherein said embedded device is capable of running without human intervention once an initial configuration is completed.

56. The embedded device in claim 48, wherein said dynamic internet streaming

5 engine is specifically designed to facilitate rapid application development and web site prototyping.

57. The embedded device in claim 48, wherein said dynamic internet streaming engine includes IP level security features.

58. The embedded device in claim 48, wherein said dynamic internet streaming engine allows developers to quickly add or change features without the need for code changes.

59. The embedded device in claim 48, wherein said dynamic internet streaming engine is capable of enabling said embedded device to deliver dynamic text and binary data stream editing for performing complex actions and making interactive web.

60. The embedded device in claim 48, wherein said dynamic internet streaming

20 engine is capable of propagating changes made in one place instantly to thousands of files.

61. The embedded device in claim 48, wherein said dynamic internet streaming engine is capable of compiling code directly into HTML.

62. The embedded device in claim 48, wherein said dynamic internet streaming engine is capable of facilitating rapid application development and web site prototyping.

63. The embedded device in claim 48, wherein said security key generating application is capable of generating security keys based on a mathematical and biological equation.

64. The embedded device in claim 48, wherein said security keys are unique and random.

65. The embedded device in claim 48, wherein said object-oriented language allows access to preprocess directives from both C++ code and HTML code.

66. An embedded web server capable of managing dynamic content delivery of data stream, said embedded web server comprising:

means for receiving a data stream from a first disk or a first network;

means for processing said data stream;

means for memorizing said data stream;

means for enabling said embedded web server to perform complex actions;

means for saving said data stream to a second disk;

means for sending said data stream to a second network; and

means for producing a session identifier, said means for producing said session identifier capable of generating said session identifiers being never repeating within certain period of time and difficult to guess, said means for producing said session identifier comprising a character-generating application, said character-generating application existing as a single task in said embedded web server, said character-generating application comprising a character generator, a random generator connecting to said character generator, a temporal reference storage connecting to said character generator, said temporal reference storage storing the most current time information, and a key-pool group connecting to said character generator, said key-pool group including any or all of a first kind of key with a first kind of pool, a second kind of key with a second kind of pool, and a third kind of key with a third kind of pool, said character generator capable of generating a character set, said character set having thirty-two different characters, based on a geometric progression of  $x(n)=p(x(n-1) + i)$ , said geometric progression manifesting itself as a chaotic progression of orbits around an origin, said orbit being defined as a unique and continuous path around said origin and never crossing in on itself or any other orbit, said  $x(n)$  and said  $x(n-1)$  representing different character sets, said  $n$  representing the number of said character sets generated by said character-generating server, said  $i$  representing a temporal difference between the time when two sequential orbits cross an arbitrary infinite vector from said origin, said  $p$  representing a period, said period being the temporal difference between character sets along any of said orbits, said geometric progression defining thirty-two periods on any of

said orbit, said character set being a first kind of character set, a second kind of character set or a third kind of character set, and

an external timer device, said external timer device connecting to said character-generating application and capable of providing both a current time and a periodic tick of approximately one second to said character-generating application.

67. The embedded web server in claim 66, wherein said data stream includes audio stream and video stream.

68. The embedded web server in claim 66, wherein said first disk and said second disk can be one disk.

69. The embedded web server in claim 66, wherein said first network and said second network can be one network.

70. The embedded web server in claim 66, wherein said session identifier is assigned to said data stream when said means for saving said data stream saves said data stream to said second disk.

71. The embedded web server in claim 66, wherein said session identifier is assigned to said data stream when said means for sending said data stream to said second network.

72. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions is specifically designed to facilitate rapid application development and web site prototyping.

5 73. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions includes IP level security features.

74. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions allows developers to quickly add or  
0 change features without the need for code changes.

75. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions enables said embedded web server to deliver dynamic text and binary data stream editing for performing complex actions and  
15 making an interactive web.

76. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions is capable of propagating changes made in one place instantly to thousands of files.

20 77. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions is capable of compiling code directly into HTML.

78. The embedded web server in claim 66, wherein said means for enabling said embedded web server to perform complex actions is capable of facilitating rapid application development and web site prototyping.

5

79. The embedded web server in claim 66, wherein said means for producing said secured session identifier is capable of generating said secured session identifier based on a mathematical and biological equation.

80. The embedded web server in claim 66, wherein said secured session identifier is unique and random.

81. The embedded web server in claim 66, wherein said embedded web server is capable of running high-performance electronic commerce web sites.

82. The embedded web server in claim 66, wherein said embedded web server is capable of embedding and securing data, content, protocols and scripts.

83. The embedded web server in claim 66, wherein said embedded web server is capable of delivering real time response.

84. The embedded web server in claim 66, wherein said embedded web server is capable of functioning as a web server.



85. The embedded web server in claim 66, wherein said embedded web server is capable of operating without an operating system.

5 86. The embedded web server in claim 66, wherein said embedded web server is capable of creating a template, said template being then compiled and loaded into said embedded web server, said template capable of specifying protocol, content, data, and being a scripting language to translate inbound requests.

10 87. The embedded web server in claim 66, wherein said embedded web server is capable of running without human intervention once an initial configuration being completed.

15 88. The embedded web server in claim 66, wherein said random generator makes a pseudo random number required by said character generator to select a position on said orbit.

20 89. The embedded web server in claim 66, wherein said first kind of pool is a list of first kind of mapping positions in said first kind of key, said first kind of mapping position is marked "used" each time said character-generating server makes a character from said first kind of key.

90. The embedded web server in claim 66, wherein said second kind of pool is a list of second kind of mapping positions in said second kind of key, said second kind of mapping position is marked "used" each time said character-generating server makes a character from said second kind of key.

5

91. The embedded web server in claim 66, wherein said third kind of pool comprises a double primary pool and a double rotating pool, said third kind of key comprises a primary key and a rotating key, said double primary pool is a list of primary mapping positions in said primary key, said double rotating pool is a list of rotating mapping positions in said rotating key, said primary mapping position is marked "used" each time said character-generating server makes a character from said primary key, and said rotating mapping position is marked "used" each time said character-generating server makes a character from said rotating key.

10

92. The embedded web server in claim 66, wherein said character-generating server clears said pool each time said pool is full, or every one second, whichever comes first.

15

93. The embedded web server in claim 66, wherein said character-generating server is capable of generating 1,065,151,899,408 said first kind of character sets every one second.

20

94. The embedded web server in claim 66, wherein said character-generating server is capable of generating thirty-two said second kind of character sets every one second.

95. The embedded web server in claim 66, wherein said character-generating server is capable of generating 1024 said third kind of character sets every one second.

5 96. The embedded web server in claim 66, wherein said first kind of character set is easier to guess than either said second kind of character set or said third kind of character set.

97. The embedded web server in claim 66, wherein said second kind of character set is guaranteed to not repeat for twenty-eight years from the activation of the character-generating server.

98. The embedded web server in claim 66, wherein said third kind of character set is an extension of a second kind of character set in the sense that it will not repeat for twenty-eight years, said third kind of character set is simpler to guess than said second kind of character set.